KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR
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GUIDANCE FOR ASSESSING INDOOR RADON CONCENTRATIONS IN KANSAS HOMES

There are many types of radon level home test kits commonly available, the most popular being *activated charcoal* (short-term) and *alpha-track* (long-term). Two basic options for testing are:

1. Perform the test yourself using one or more test kits obtained from the American Lung Association, a hardware store or other retail outlet, a radon measurement company, or directly from one of the laboratories which assemble and perform laboratory analysis of the test kits.

2. Have a radon measurement company come to your home to perform the test(s). This would generally involve the placement of a test kit or portable instrument at one or several locations in your home. The company would then return to collect the test kit(s) and send them to the laboratory for analysis, or obtain the measurements from the portable instrument. Some companies provide consultation regarding the results and further action that may be recommended. A list of radon mitigation contractors who have passed EPA's Radon Proficiency Program requirements is available through this department.

SHORT-TERM TESTING

Although many homeowners choose to do a short-term test to determine a potential for elevated radon concentration levels in their home using an activated charcoal test or other short-term device, short-term testing over several days is not a reliable measure of the annual average radon concentration to which a family is exposed and should not be used to evaluate health risk. It is not recommended that action be taken to reduce radon levels on the basis of a single short-term test. If you need results quickly, such as in a real estate transaction, a short-term test followed by a second short-term test may be used to decide whether to fix the home. Refer to The Home Buyer's and Seller's Guide to Radon publication available through this department.

To record the maximum radon concentration measurement in the home, testing should be done under CLOSED HOUSE CONDITIONS and in the LOWEST LIVING AREA of the home. AVOID performing the test(s) near windows, exterior doors, sump pumps, and heating/air conditioning vents. AVOID testing kitchens, baths, and laundry rooms since humidity can cause an inaccurate measurement. The room with the highest occupancy factor, usually the master bedroom, would be a good location. Additional measurements can be made simultaneously in other parts of the home for comparison purposes, if desired.

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Measurements using short-term testing are limited to three to seven days, after which the device must be immediately sealed and sent to the lab for analysis. If the results are BELOW 4pCi/l, it's likely you need not be concerned about the radon concentrations in your home. A long-term test is probably not necessary, but plan to retest your home again in several years or when remodeling. In making the decision of whether to perform a long-term test in borderline measurement instances, consider these factors:

1. The *part of the house* in which the screening test(s) was/were made. Generally, the lower levels of the house will have the highest radon concentrations.

2. The *amount of time* spent in the particular room or area where the test(s) was/were performed. EPA's estimates of radon health risks are based on an individual spending 75 percent of their time exposed to an average annual radon concentration over a 70-year period. Elevated radon concentrations in the basement may not require mitigation if little time is spent in the basement, and the radon concentrations are at acceptable levels in the parts of the home which are most frequently occupied.

3. The *sampling conditions* during the short-term test(s). Generally, radon concentrations will be highest during the winter months when homes are tightly closed. However, measurements can be made during any season as long as closed house conditions are maintained. Radon concentrations also tend to be higher during periods of low barometric pressure.

If results come back at 4pCi/l or ABOVE, follow up with long-term testing which will give a more accurate measure of annual average radon concentration. In the exceptional instances in which results come back at 20pCi/l or above, follow up with a repeat short-term test, or a long-term test of not more than three months, to allow a more speedy decision on reducing radon levels.

LONG-TERM TESTING

Alpha-track tests and other long-term devices are designed for measurements which record the daily and seasonal fluctuations in the radon concentration in your home. Measurements with these devices are for a minimum of three months and preferably for a full year. Some homeowners choose to begin their testing with an alpha-track measurement rather than beginning with a short term test. Such measurements provide an indication of the annual average radon concentration in the room(s) or area(s) where the measurements are taken. This provides a more accurate measurement which can be used to assess the potential health risk from the radon concentration to which the homeowner is actually exposed.

If long term measurements indicate that you and your family are being exposed to elevated levels of radon (4pCi/l or above), we recommend taking action to reduce those levels. A number of publications are available upon request which provide guidance in reducing radon concentrations in your home. A list of contractors who perform radon mitigation and have passed EPA's Radon Proficiency Program Requirements is also available.

Please feel free to contact our office for assistance in evaluating your particular situation and determining what remedial actions, if any, should be considered.

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